

Table 2. Association between dementia stage (CDR code) and gait variables (One-way ANOVA)

All participants	SP	UP	FP	AW	CW
Normalized gait speed					
p-value	0.01	< 0.001	< 0.001	< 0.001	< 0.001
F-value	3.85	18.5	17.4	12.1	12.4
df1	3	3	3	3	3
df2	499	514	504	477	465
Gait speed					
p-value	0.004	< 0.001	< 0.001	< 0.001	< 0.001
F-value	4.5	22.3	19.9	14.2	15.0
df1	3	3	3	3	3
df2	503	521	510	483	473
Cadence					
p-value	0.02	0.02	0.04	> 0.05	> 0.05
F-value	3.33	3.42	2.75	0.65	1.09
df1	3	3	3	3	3
df2	503	521	510	482	473
Base of support					
p-value	> 0.05	> 0.05	> 0.05	0.003	> 0.05
F-value	0.65	2.20	0.50	4.61	1.26
df1	3	3	3	3	3
df2	503	521	510	482	473
Base of support variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	0.76	1.39	1.61	1.02	0.55
df1	3	3	3	3	3
df2	101	379	468	149	163
Cycle time variability					
p-value	0.02	> 0.05	> 0.05	> 0.05	> 0.05
F-value	3.50	1.62	0.98	1.03	1.57
df1	3	3	3	3	3
df2	101	379	466	149	162
Swing time variability					
p-value	> 0.05	0.003	< 0.001	0.01	0.007
F-value	1.27	4.85	7.90	3.92	4.18
df1	3	3	3	3	3
df2	101	379	466	149	163
Steps/Meter					
p-value	> 0.05	< 0.001	< 0.001	< 0.001	< 0.001
F-value	1.32	18.0	15.5	6.38	8.00
df1	3	3	3	3	3
df2	101	378	468	149	163
DTC gait speed					
p-value				0.04	> 0.05
F-value				2.86	1.05
df1				3	3
df2				483	472

DTC cadence					
p-value	> 0.05	> 0.05			
F-value	0.72	0.81			
df1	3	3			
df2	482	472			
DTC bass of support					
p-value	0.05	> 0.05			
F-value	2.63	1.15			
df1	3	3			
df2	482	471			
DTC bass of support variability					
p-value	> 0.05	> 0.05			
F-value	0.43	0.69			
df1	3	3			
df2	147	162			
DTC cycle time variability					
p-value	> 0.05	> 0.05			
F-value	0.56	1.19			
df1	3	3			
df2	149	162			
DTC swing time variability					
p-value	0.002	> 0.05			
F-value	5.30	0.37			
df1	3	3			
df2	149	162			
DTC steps/Meter					
p-value	< 0.001	0.01			
F-value	6.20	3.77			
df1	3	3			
df2	480	470			
DTC normalized gait speed					
p-value	0.02	> 0.05			
F-value	3.16	0.79			
df1	3	3			
df2	476	465			
Normalized steps/Meter					
p-value	< 0.001	< 0.001	< 0.001	< 0.001	
F-value	8.03	16.0	13.4	19.1	
df1	3	3	3	3	
df2	495	511	502	476	
50 to 70 years old participants	SP	UP	FP	AW	CW
Normalized gait speed					
p-value	> 0.05	0.03	0.03	> 0.05	> 0.05
F-value	0.34	3.10	3.14	0.88	1.49
df1	3	3	3	3	3
df2	68	68	68	66	61
Gait speed					

	> 0.05	0.02	0.02	> 0.05	> 0.05
p-value	0.55	3.62	3.71	0.89	1.82
F-value	3	3	3	3	3
df1	67	68	68	66	62
df2					
Cadence					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	1.93	0.37	0.29	0.58	0.84
df1	3	3	3	3	3
df2	67	68	68	65	62
Base of support					
p-value	0.05	0.04	0.006	> 0.05	> 0.05
F-value	2.71	2.91	4.46	1.22	2.00
df1	3	3	3	3	3
df2	67	68	68	65	62
Base of support variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	2.63	1.94	1.00	1.34	0.99
df1	3	3	3	3	3
df2	25	66	68	35	37
Cycle time variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	2.90	0.01	0.17	0.93	0.64
df1	3	3	3	3	3
df2	25	66	68	35	37
Swing time variability					
p-value	> 0.05	> 0.05	0.03	> 0.05	> 0.05
F-value	0.44	2.02	3.06	1.87	1.54
df1	3	3	3	3	3
df2	25	66	68	35	37
Steps/Meter					
p-value	> 0.05	< 0.001	0.01	> 0.05	0.02
F-value	2.61	6.44	3.86	1.95	3.97
df1	3	3	3	3	3
df2	25	66	68	35	37
DTC gait speed					
p-value				> 0.05	> 0.05
F-value				0.11	0.29
df1				3	3
df2				66	62
DTC cadence					
p-value				> 0.05	> 0.05
F-value				0.51	0.88
df1				3	3
df2				65	62
DTC bass of support					
p-value				> 0.05	> 0.05
F-value				0.26	0.27
df1				3	3
df2				65	62
DTC bass of support					

variability				
p-value		> 0.05	> 0.05	
F-value		0.69	0.67	
df1		3	3	
df2		35	36	
DTC cylce time variability				
p-value		> 0.05	> 0.05	
F-value		0.93	0.74	
df1		3	3	
df2		35	37	
DTC swing time variability				
p-value		> 0.05	> 0.05	
F-value		0.63	1.21	
df1		3	3	
df2		35	37	
DTC steps/Meter				
p-value		> 0.05	> 0.05	
F-value		1.34	1.58	
df1		3	3	
df2		65	62	
DTC normalized gait speed				
p-value		> 0.05	> 0.05	
F-value		0.11	0.05	
df1		3	3	
df2		66	62	
Normalized steps/Meter				
p-value	> 0.05	0.02	0.02	> 0.05
F-value	0.67	3.41	3.45	2.52
df1	3	3	3	3
df2	67	68	68	61
70 to 80 years old participants	SP	UP	FP	AW
				CW
Normalized gait speed				
p-value	0.05	< 0.001	0.004	0.05
F-value	2.69	5.81	4.49	2.62
df1	3	3	3	3
df2	218	218	217	212
Gait speed				
p-value	0.03	< 0.001	< 0.001	0.02
F-value	2.97	8.07	6.09	3.30
df1	3	3	3	3
df2	221	222	220	215
Cadence				
p-value	> 0.05	> 0.05	> 0.05	> 0.05
F-value	1.08	1.47	2.19	0.47
df1	3	3	3	3
df2	221	222	220	215
Base of support				
p-value	> 0.05	> 0.05	> 0.05	> 0.05
F-value	0.58	0.71	0.28	1.17
				0.68

df1	3	3	3	3	3
df2	221	222	220	215	207
Base of support variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	0.20	1.08	1.92	0.36	0.40
df1	3	3	3	3	3
df2	48	181	207	79	80
Cycle time variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	2.58	0.21	0.93	1.16	2.04
df1	3	3	3	3	3
df2	48	181	207	79	79
Swing time variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	0.01
F-value	1.67	1.81	2.07	2.21	3.78
df1	3	3	3	3	3
df2	48	181	207	79	80
Steps/Meter					
p-value	0.003	< 0.001	> 0.05	< 0.001	0.002
F-value	5.52	6.29	2.28	6.16	5.35
df1	3	3	3	3	3
df2	48	180	207	79	80
DTC gait speed					
p-value			> 0.05		> 0.05
F-value			0.62		0.15
df1			3		3
df2			215		207
DTC cadence					
p-value			> 0.05		> 0.05
F-value			0.96		0.44
df1			3		3
df2			215		207
DTC bass of support					
p-value			> 0.05		> 0.05
F-value			0.45		1.19
df1			3		3
df2			215		207
DTC bass of support variability					
p-value			> 0.05		> 0.05
F-value			0.04		1.20
df1			3		3
df2			78		80
DTC cylce time variability					
p-value			> 0.05		> 0.05
F-value			0.77		2.17
df1			3		3
df2			79		79
DTC swing time variability					
p-value			0.03		> 0.05
F-value			3.11		0.82

df1		3	3	
df2		79	79	
DTC steps/Meter				
p-value		> 0.05	> 0.05	
F-value		1.68	1.51	
df1		3	3	
df2		213	206	
DTC normalized gait speed				
p-value		> 0.05	> 0.05	
F-value		0.82	0.19	
df1		3	3	
df2		211	203	
Normalized steps/Meter				
p-value	0.03	0.002	0.02	< 0.001
F-value	2.95	5.21	3.33	7.16
df1	3	3	3	3
df2	218	218	217	212
Over 80 years old participants				
	SP	UP	FP	AW
	CW			
Normalized gait speed				
p-value	> 0.05	> 0.05	0.03	0.003
F-value	1.29	2.37	3.11	4.93
df1	3	3	3	3
df2	211	226	217E	197
Gait speed				
p-value	> 0.05	> 0.05	0.03	0.001
F-value	1.31	2.51	3.06	5.56
df1	3	3	3	3
df2	213	229	220	200
Cadence				
p-value	> 0.05	> 0.05	> 0.05	> 0.05
F-value	2.22	1.06	1.22	0.92
df1	3	3	3	3
df2	213	229	220	200
Base of support				
p-value	> 0.05	> 0.05	> 0.05	> 0.05
F-value	0.51	0.85	0.25	1.22
df1	3	3	3	3
df2	213	229	220	200
Base of support variability				
p-value	> 0.05	> 0.05	> 0.05	> 0.05
F-value	1.10	1.90	0.70	0.72
df1	3	3	3	3
df2	26	130	191	33
Cycle time variability				
p-value	> 0.05	0.03	> 0.05	> 0.05
F-value	0.40	3.12	1.03	2.15
df1	3	3	3	3
df2	26	130	189	33
				44

Swing time variability					
p-value	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
F-value	0.48	0.89	1.86	0.83	1.05
df1	3	3	3	3	3
df2	26	130	189	33	44
Steps/Meter					
p-value	> 0.05	0.01	0.003	> 0.05	> 0.05
F-value	0.14	3.69	4.86	0.08	0.74
df1	3	3	3	3	3
df2	26	130	191	33	44
DTC gait speed					
p-value			0.004	> 0.05	
F-value			4.58	1.85	
df1			3	3	
df2			200	201	
DTC cadence					
p-value			> 0.05	> 0.05	
F-value			1.98	1.42	
df1			3	3	
df2			200	201	
DTC bass of support					
p-value			> 0.05	> 0.05	
F-value			1.98	0.66	
df1			3	3	
df2			200	200	
DTC bass of support variability					
p-value			> 0.05	> 0.05	
F-value			0.65	0.53	
df1			3	3	
df2			32	44	
DTC cycle time variability					
p-value			> 0.05	> 0.05	
F-value			2.25	1.09	
df1			3	3	
df2			33	44	
DTC swing time variability					
p-value			> 0.05	> 0.05	
F-value			2.17	0.17	
df1			3	3	
df2			33	44	
DTC steps/Meter					
p-value		0.01		> 0.05	
F-value		3.86		2.31	
df1		3		3	
df2		200		200	
DTC normalized gait speed					
p-value		0.003		> 0.05	
F-value		4.88		1.84	
df1		3		3	
df2		197		198	

Normalized steps/Meter					
p-value	> 0.05	0.04	> 0.05	0.002	0.01
F-value	1.15	2.76	2.56	5.15	3.90
df1	3	3	3	3	3
df2	208	223	215	197	197

CDR: Clinical Dementia rating. DTC : dual task cost. UP: Usual pace, FP: Fast pace, SP: slow pace,
AW: animal reciting walk, CW: counting walk. p value significant when ≤ 0.05 (in bold).